

Abstract Of The Disclosure

A stability control system (24) for an automotive vehicle as includes a plurality of sensors (28-37) sensing the dynamic conditions of the vehicle and a controller (26) that controls a distributed brake pressure to reduce a tire moment so the net moment of the vehicle is counter to the roll direction. The sensors include a speed sensor (30), a lateral acceleration sensor (32), a roll rate sensor (34), and a yaw rate sensor (20). The controller (26) is coupled to the speed sensor (30), the lateral acceleration sensor (32), the roll rate sensor (34), the yaw rate sensor (28). The controller (26) determines a roll angle estimate in response to lateral acceleration, roll rate, vehicle speed, and yaw rate. The controller (26) changes a tire force vector using brake pressure distribution in response to the relative roll angle estimate.